Title: Movin' On!

Brief Overview:

Students will gather information about Brazil to help a "classmate" learn about the country to which his family is moving. They will perform some activities as they collect all the information. Some tasks will include plotting using coordinates, estimating and measuring distances in inches and converting to miles, interpreting and constructing bar graphs, logical reasoning, comparing rainfall and temperature using data, and writing an informational paragraph comparing Manaus, Brazil and Baltimore, Maryland using all the information gathered.

NCTM 2000 Principles for School Mathematics:

- **Equity:** *Excellence in mathematics education requires equity - high expectations and strong support for all students.*
- **Curriculum:** *A curriculum is more than a collection of activities: it must be coherent, focused on important mathematics, and well articulated across the grades.*
- **Teaching:** *Effective mathematics teaching requires understanding what students know and need to learn and then challenging and supporting them to learn it well.*
- **Learning:** *Students must learn mathematics with understanding, actively building new knowledge from experience and prior knowledge.*
- **Assessment:** *Assessment should support the learning of important mathematics and furnish useful information to both teachers and students.*
- **Technology:** *Technology is essential in teaching and learning mathematics; it influences the mathematics that is taught and enhances students' learning.*

Links to NCTM 2000 Standards:

- **Content Standards**

<u>Number and Operations</u>

- *Understand numbers, ways of representing numbers, relationships among numbers, and number systems; recognize equivalent representations for the same number and generate them by decomposing and composing numbers; develop understanding of fractions as parts of unit wholes, as parts of a collection, as locations on number lines, and as divisions of whole numbers; use models, benchmarks, and equivalent forms to judge the size of fractions; and recognize and generate equivalent forms of commonly used fractions, decimals, and percents.*
- *Compute fluently and make reasonable estimates; develop and use strategies to estimate computations involving fractions and decimals in situations relevant to students' experience; and select appropriate methods and tools for computing with whole numbers from among*

mental computation, estimate, calculators, and paper and pencil according to the context and nature of the computation and use the selected method or tools.

Algebra

- *Understand patterns, relations, and functions; and represent and analyze patterns and functions, using words, tables, and graphs.*
- *Use mathematical models to represent and understand quantitative relationships; and model problem situations with objects and use presentations such as graphs, tables, and equations to draw conclusions.*

Geometry

- *Specify locations and describe spatial relationships using coordinate geometry and other representational systems; describe location and movement using common language and geometric vocabulary; make and use coordinate systems to specify locations and to describe paths; and find the distance between points along horizontal and vertical lines of a coordinate system.*

Measurement

- *Understand measurable attributes of objects and the units, systems, and processes of measurement; understand such attributes as length, area, weight, volume, and size of angle and select the appropriate type of unit for measuring each attribute; understand the need for measuring with standard units and become familiar with standard units in the customary and metric systems; carry out simple unit conversions, such as from centimeters to meters, within a system of measurement; understand that measurements are approximate and how differences in units affect precision; and explore what happens to measurements of a two-dimensional shape such as its perimeter and area when the shape is changed in some way.*
- *Apply appropriate techniques, tools, and formulas to determine measurements, develop strategies for estimating the perimeters, areas, and volumes of irregular shapes; select and apply appropriate standard units and tools to measure length, area, volume, weight, time, temperature, and the size of angles; and select and use benchmarks to estimate measurements.*

Data Analysis and Probability

- *Formulate questions that can be addressed with data and collect, organize and display relevant data to answer them; collect data using observations, surveys, and experiments; and represents data using tables and graphs such as: line plots, bar graphs, and line graphs.*
- *Select and use appropriate statistical methods to analyze data; describe the shape and important features of a set of data and compare related data sets, with an emphasis on how data are distributed; use measure of center, focusing on the median and understand*
- *what each foes and does not indicate about the data set; an compare different representations of the same data and evaluate how ell each representation shows important aspects of the data.*
- *Develop and evaluate inferences and predictions that are based on data; and propose and justify conclusions and predictions that are based on data and design studies to further investigate the conclusions or predictions.*

- **Process Standards**

Problem Solving

- *Instructional programs from pre-kindergarten through grade 12 should enable all students to build new mathematical knowledge through problem solving; solve problems that arise in mathematics and in other contexts; apply and adapt a variety of appropriate strategies to solve problems; and monitor and reflect on the process of mathematical problem solving.*

Reasoning and Proof

- *Instructional programs from pre-kindergarten through grade 12 should enable all students to recognize reasoning and proof as fundamental aspects of mathematics; make and investigate mathematical conjectures; develop and evaluate mathematical arguments and proofs; and select and use various types of reasoning and methods of proof.*

Communication

- *Instructional programs from pre-kindergarten through grade 12 should enable all students to organize and consolidate their mathematical thinking through communication; communicate their mathematical thinking coherently and clearly to peers, teachers, and others; analyze and evaluate the mathematical thinking and strategies of others; and the language of mathematics to express mathematical ideas precisely.*

Connections

- *Instructional programs from pre-kindergarten through grade 12 should enable all students to recognize and use connections among mathematical ideas; understand how mathematical ideas interconnect and build on one another to produce a coherent whole; and recognize and apply mathematics in context outside of mathematics.*

Representation

- *Instructional programs from pre-kindergarten through grade 12 should enable all students to create and use representations to organize, record, and communicate mathematical ideas; select, apply, and translate among mathematical representations to solve problems; and use representations to model and interpret physical, social, and mathematical phenomena.*

Grade/Level:

Grades 2-3

Duration/Length:

Five days of 60 minutes each

Prerequisite Knowledge:

Students should have working knowledge of the following skills:

- Estimation
- Number relationships
- Measuring lengths
- Reading, interpreting, and constructing a bar graph
- Using grids and coordinates
- Analyzing data including trends
- Problem Solving Strategies

Student Outcomes:

Students will:

- Plot locations on a grid using given coordinates
- Estimate and measure the distance between cities on a map and convert inches to miles using a scale
- Read, interpret, and analyze data from graphs
- Apply logical reasoning to perform a task
- Construct a bar graph using data from a table
- Use an estimating strategy to get a more accurate estimate
- Use problem solving skills and critical thinking to answer questions
- Use a Venn Diagram to compare and contrast two cities from different countries, utilizing data that they have gathered
- Write an informational report using the information on the Venn Diagram

Materials/Resources/Printed Materials:

- For each group of 4 students, a large piece of white paper with the Placemat Organizer drawn on it as shown on Teacher Resource Sheet # 1
- Chart paper
- World map or globe
- Map of the United States
- Nonfiction books about Brazil and its rainforest animals
- Rulers and markers
- Crayons or colored pencils
- Overhead transparencies of Teacher Resource Sheets # 2, 3, and 8
- Teacher Resource Sheets # 1-6
- Student Resource Sheets # 1-10

Development/Procedures:

Day One

- Introduce the scenario of a boy named Michael in your class whose father, an environmental scientist, is being sent to Brazil to help with their problem of pollution and destruction of the natural habitat. Because of this, Michael and his family will be moving to Brazil, in the city of Manaus.
- Show the students a world map or a globe and guide them to find Brazil. Have students think about what they already know about Brazil and give each small group of 3 or 4 students a large Placemat Organizer (Teacher Resource Sheet # 1) and some markers. Allow 10-15 minutes for the students to write their individual and "agreed upon" ideas and have each spokesperson share with the whole class. Tell the students that their ideas may or may not be true or accurate, but in the next few days they will learn more about Brazil.
- After all the charts have been displayed, recall students' knowledge of a grid and plotting on the grid using coordinates. Sketch a large rectangle on the board to represent the classroom. Tell them that a grid is made up of lines that go across which are called horizontal lines, and lines that go up and down, called vertical lines. Have students help number the lines along the side and the bottom. Let them look around the room and together decide what objects will go on the grid. Limit the number of objects and list them on the board. Draw a simple symbol for one of the objects on the grid. Explain that we can use coordinates to pinpoint the location of the object on the grid. Model how to follow the "rule" over and up as they look for the numbers that make up the coordinates. Have them practice finding the objects using coordinates or finding the objects on the grid and supplying the coordinates. If additional practice is necessary, use the overhead transparency of Teacher Resource Sheet # 2 for a brief review of about 5 minutes. Have students record the coordinates for each picture.
- Tell the students that Michael is going to live in the city of Manaus. Show an overhead transparency of Teacher Resource Sheet # 3 and together find Manaus on the map. Locate the capital city of Brasilia and the cities of Salvador, Macapa, and Rio de Janeiro. Also point out that the second longest river in the world runs through Brazil. Have students look for the Amazon River on the northern end. (The Nile in Egypt is the longest.)
- Tell the students that there are other cities in Brazil that Michael's father might be traveling to in order to get a first-hand knowledge of their environmental problems. Michael would want to get an idea as to where those cities are located in Brazil. Tell them that they will help Michael find them. Give each pair of students a copy of Student Resource Sheet # 1. Tell them that they are looking at the outline of the map of Brazil on a grid. Focus on the cities and the coordinates on the bottom and tell the students that they will work together to plot each of the cities using the coordinates.
- Conclude Day One by asking the students what they learned about Brazil today. Record students' ideas on a chart and tell them that they will continue to add more to the chart each day.

Day Two

- Go back to the chart that was started yesterday to review what students have learned about Brazil so far. Tell them that today they will do more activities that will help them learn more about Brazil.
- Show a map of the United States and tell the students that sometimes a student transfers to our school from another state. Ask them in what state our school is located and have them find Maryland. Tell them that if the student were transferring from Virginia, which direction would she travel? Give a few more examples.
- Give each student a copy of Student Resource Sheet # 2. Tell them that they now have a copy of the overhead map of Brazil that they saw yesterday. Recall the city that Michael is moving to and together find it on the map. If students are able, have them use directional words to describe its location. Do the same for the capital city of Brasilia and the other cities on the students' sheets.
- Tell the students that after Michael moves to his new city, he and his family may want to travel to visit the capital city of Brazil. Ask the students how they will be able to estimate how far Michael will have to travel. Guide students to conclude that they will have to measure from Manaus to Brasilia and then use the scale on the bottom of the map to find the distance in miles. Be sure to tell the students that they will measure to the nearest inch from dot to dot on the map.
- Refer back to the United States map and locate Maryland and Virginia. Model how to measure with a ruler in inches about how far the transferring student had to travel to move to Maryland. Show the students how to convert the measurement into miles using the scale on the map.
- Explain the directions on the Student Resource Sheet # 2. Be sure the students understand that they need to estimate the measurements first before actually measuring. Have students work individually as they estimate and measure. Give them the option to work with a partner when converting into the actual distance and writing the answers to the questions. (Note: Using the scale, 1 ½ inches equals 1,000 miles. You may want to show your students that ½ inch equals 1/3 of 1,000 which is 333 miles.)
- Have students share their findings.
- Conclude today's session by reading a short nonfiction book about Brazil and have students help add more information about Brazil on the chart.

Day Three

- Depending on the current season, discuss the weather that the students are experiencing in their own region.
- Go into a brief discussion of the seasonal changes and how they affect their lives.
- Show Brazil on the world map or globe and have a discussion of what they think the weather is like in Brazil. Have students explain their thinking.
- Ask the students if they think Michael would be able to continue to enjoy the seasonal activities that he enjoyed doing here when he moved to Brazil. Have a discussion of

some activities that they enjoy for each season and have them predict as to whether Michael would be able to do those activities. Have them explain their thinking.

- Give each pair of students Student Resource Sheet # 3 and have them explain the data, using the title and labels. Have each pair complete questions 1-4.
- Based on the data from the two graphs, have students generalize how climate conditions are different or alike in Manaus and Baltimore. Have pairs go back to their resource sheets and together complete questions 5 and 6. Have them share their answers with another pair.
- Point out that the seasons in the United States and those countries below the equator are opposites. Establish the current season in Baltimore and decide what season they are having in Brazil.
- Give each student a copy of Student Resource Sheet # 4 and read the directions to the students pointing out that they have learned that the countries below the equator have seasons opposite from ours. Be sure to remind them that the items that they will check would be the things that Michael would be able to use when he got there. Have them complete the sheet independently and collect them.
- Add some information on the chart.

Day Four

- Have students review Brazil's weather based on what they learned yesterday.
- If no one mentions about the rainfall in Brazil have the students think about whether Michael would be experiencing little or a lot of rain all year in his new country. After some discussions, give each student a copy of Student Resource Sheet # 5. Inform students that they will read and analyze the data on the sheet and then construct a bar graph to represent the data.
- Review the elements or characteristics of a bar graph, which are the title, labels, numbers, and key and list them on the board.
- Allow 10-15 minutes for the students to do this sheet independently. Encourage them to use crayons to color their bars on the graph. Give them the choice of using the same or different colors for the bars. Collect the sheets and assess them using Teacher Resource Sheet # 4.
- Remind the students that Michael's father is going to Brazil to help some of the endangered animals that live in the rainforest. Have students share some of the rainforest animals that they have heard about.
- Read a book about the rainforest animals of Brazil (about 10 minutes). Briefly discuss some of the animals from the book. Tell the students that there are many, many different kinds of butterflies and moths in the rainforest. However, some of them have become extinct and many are endangered. Michael's dad might go into the rainforest to collect a sampling of the butterflies that they would study.
- Give each student a copy of Student Resource Sheet # 6. Have them quickly look at the butterflies in the picture (5 seconds) and write an estimate under the Guess column on the sheet and have them turn their paper over.
- Quickly review some strategies that students can use to estimate more accurately. (See Teacher Resource Sheet # 5). Tell students that they will use the estimating

strategy called anchoring to make a better estimate of how many butterflies are shown on their sheet. Allow about 5 minutes for them to work together in pairs using the strategy. Then have them complete the sheet.

- If time permits, use Student Resource Sheet # 7 as an extension activity to reinforce problem-solving skills.
- Elicit new information that can be added to the chart.

Day Five

- Display the chart and announce that the students have been helpful in preparing Michael for his move to Brazil. Tell them that they will take back their Placemat Organizers that were done on day one. Have them regroup together and decide which of the ideas that were written are true according to what they learned. If there are disagreements or questions, ask students how they could verify the accuracy of the information. Encourage them to do further research on their own.
- Proceed to the Performance Assessment below.

Performance Assessment:

- Tell the students that they will now think about all the information that they have gathered about Michael's new city and country. Tell them that they will also think about Michael's soon to be "former city and state", Baltimore, Maryland.
- Give each student a copy of Student Resource Sheet # 8. Using an overhead transparency copy of the sheet, and the students using their own sheets, read aloud together the prompt and highlight the key information, such as the form, audience, topic and purpose.
- Discuss with the students the kinds of details they will include in their report to help Michael to understand his new city and country by comparing it to Baltimore, Maryland.
- Explain to the students that before writing you should always plan. When comparing two things, a Venn Diagram is an appropriate choice of organizers. Give each student a Venn Diagram organizer (Student Resource Sheet # 9). Briefly review how to use the organizer. Have one circle labeled as Baltimore, Maryland and the other Manaus, Brazil. Tell the students that they will think about what they learned about Brazil and what they know about Baltimore, Maryland and then compare and contrast the two cities. Remind them to write information on the appropriate areas and circles. Allow about 10 minutes of writing.
- Remind the students that they will write an informational report using their notes on the Venn Diagram. Tell them that the paragraphs will be assessed and graded according to a rubric that they will help you develop.
- Brainstorm for the criteria that will be used to determine the points that they will get for their finished product. See Teacher Resource Sheet # 6 for ideas.

- Allow 15 – 20 minutes of writing the report on Student Resource Sheet # 10 and 10 minutes of peer or self-editing and revising. Constantly remind the students of the criteria that you will use to grade their work.

Extension/Follow Up:

- Students may continue to gather additional information about Brazil and create a slide show or put together a booklet.
- The teacher could create a bulletin board or door display using the completed paragraphs and student generated pictures.
- A unit on the rainforest plants and animals could follow this unit.
- Invite a resource person to speak about Brazil. Utilize the resources in the community or colleges.

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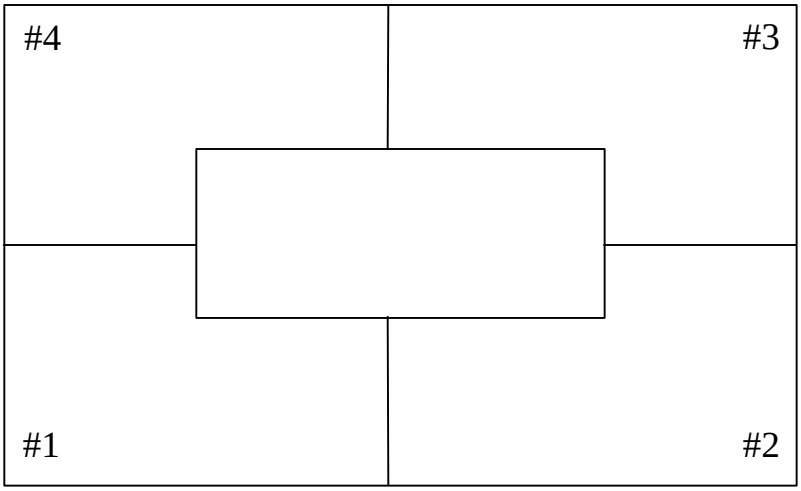
Placemat Strategy



1. Give a piece of large chart paper to each group of four students.

2. Instruct the students to draw a design like the one above.

3. Each student will choose a number (1 – 4) and then assume a role according to the chart.

#1 Recorder	#3 Timekeeper
#2 Facilitator	#4 Spokesperson

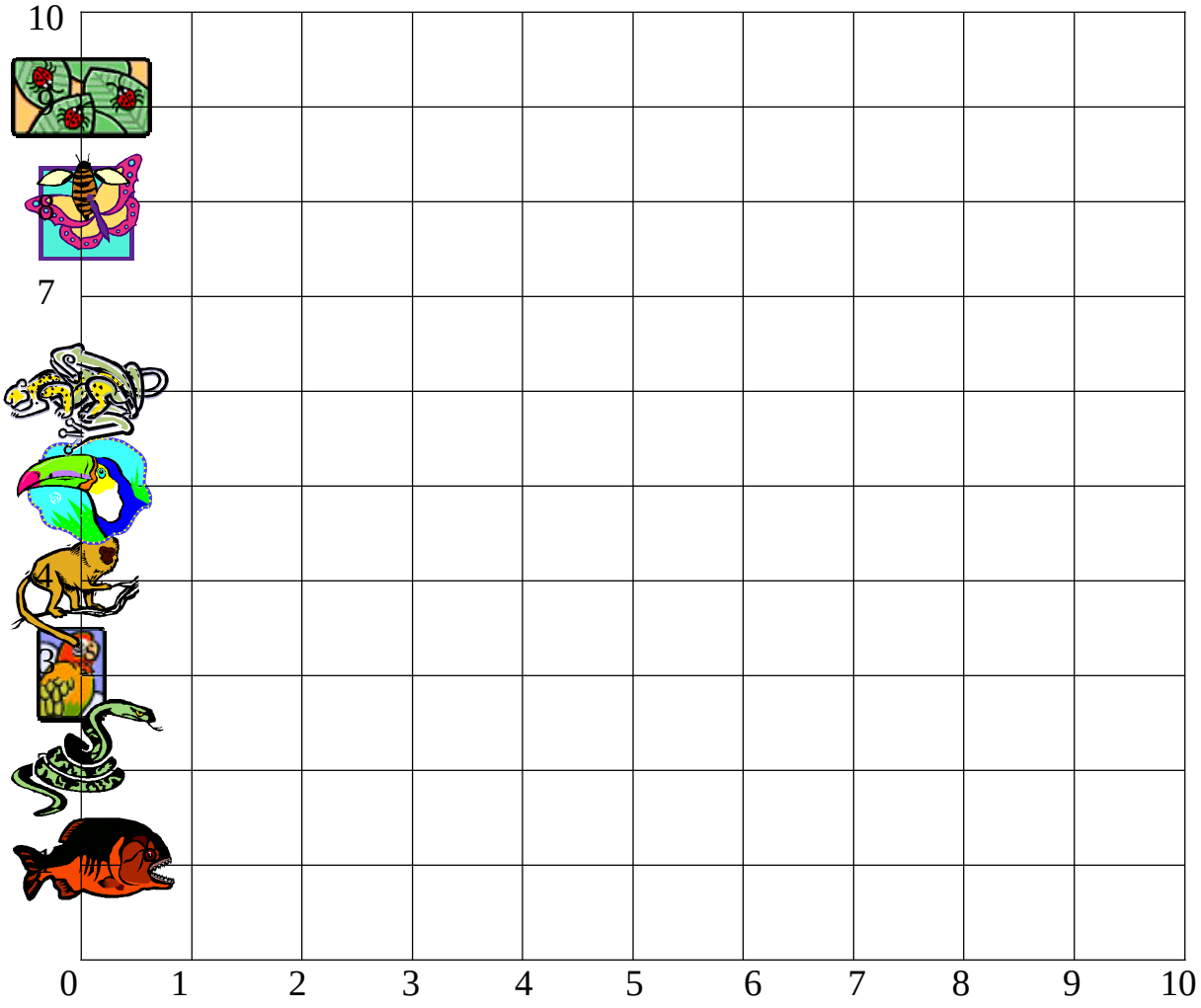
4. Pose a question to the students. (Example: What do you know about Brazil?) Let the students brainstorm all ideas by writing in the space in front of them.

5. Then, the facilitator will focus the discussion and the recorder will record all ideas in the center that are agreed upon by consensus. The timekeeper will remind the group of the time.

6. Finally, hang up the placemat. The spokesperson tells the rest of the class what their group has agreed upon.

Designed by Pat Baltzley, Baltimore County Public Schools

Amazon Rainforest Grid



Using the grid, write the coordinates for each rainforest creature.

Snake _____ Parrot _____ Piranha _____

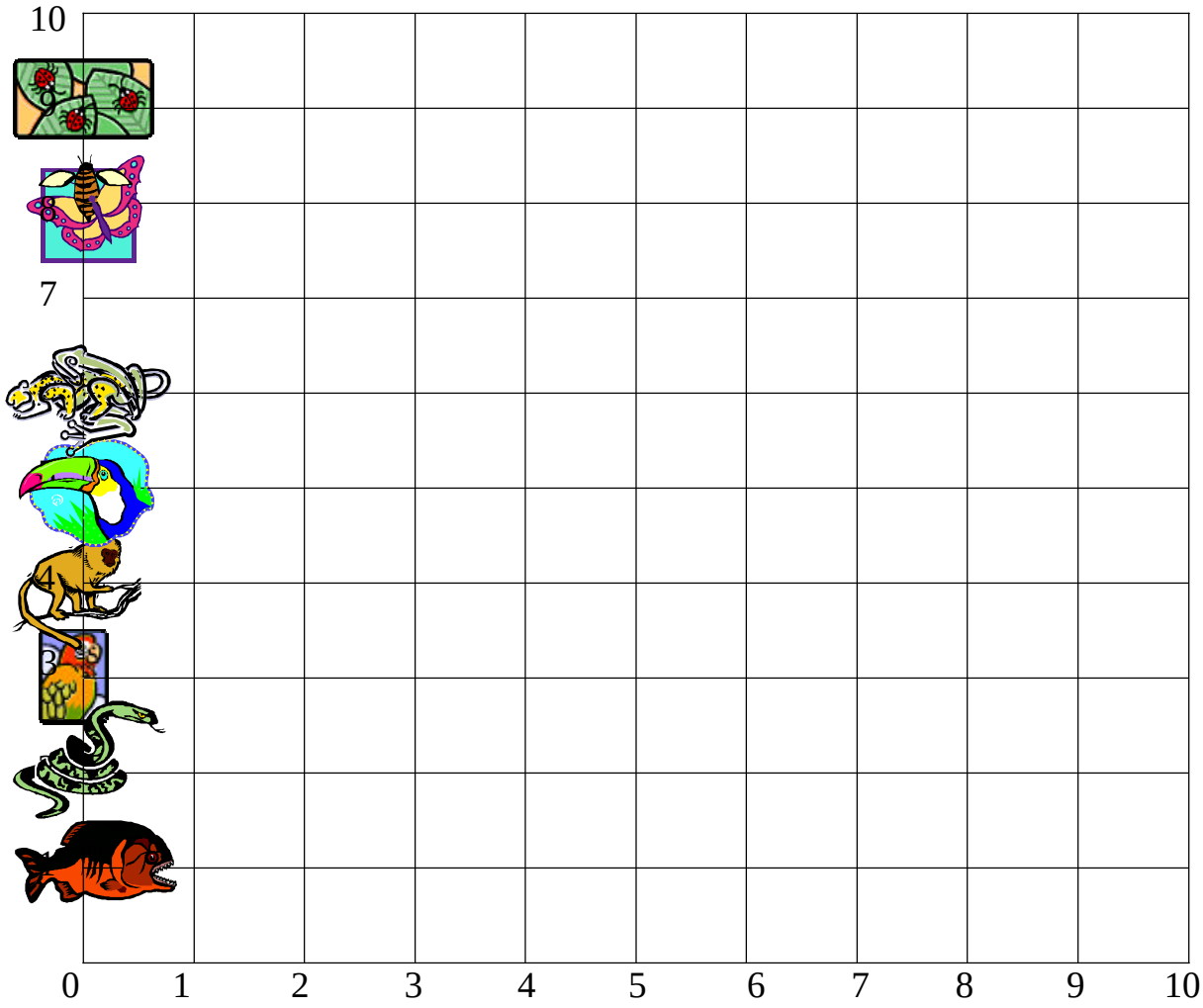
Beetles _____ Butterfly _____ Bee _____

Jaguar _____ Monkey _____ Toucan _____

Frog _____

Teacher Resource Sheet # 2
(ANSWER KEY)

Amazon Rainforest Grid



Using the grid, write the coordinates for each rainforest creature.

Snake __(6,2)___ Parrot ___(9,3)___ Piranha __(1,1)_

Beetles _(2,9)___ Butterfly _(9,8)___ Bee ___(6,8)___

Jaguar __(8,6)___ Monkey __(3,4)__ Toucan __(1,5)_

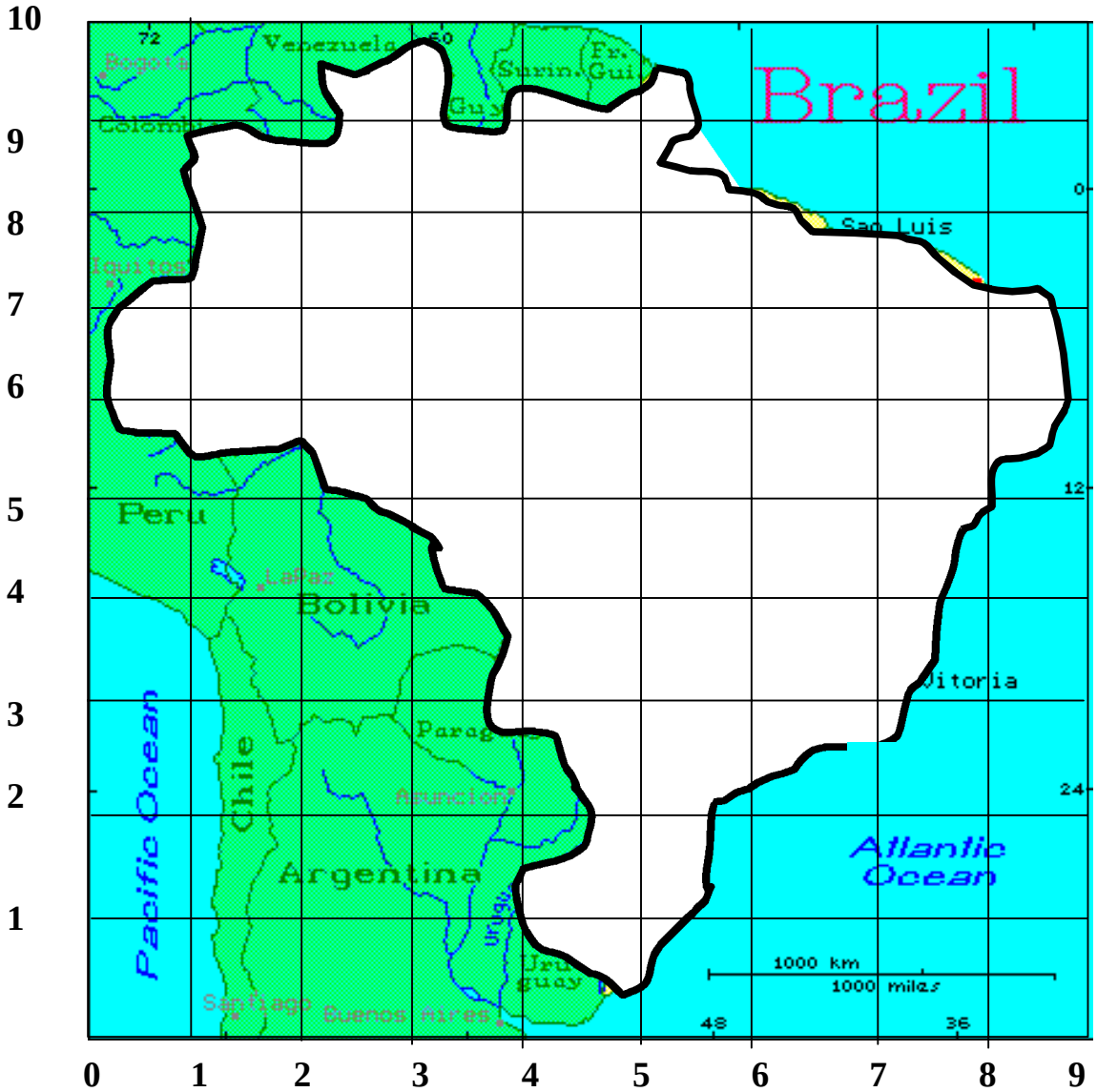
Frog ____(5,6)__

Where in Brazil?

Student Resource Sheet # 1

Name: _____ **Date:** _____

Michael began his study of Brazil by going to the Atlas. He found a map of Brazil. On the grid below, plot Manaus, and the other cities Michael found on the map using the given coordinates.



Manaus (3 , 8) Brasilia (6 , 5)

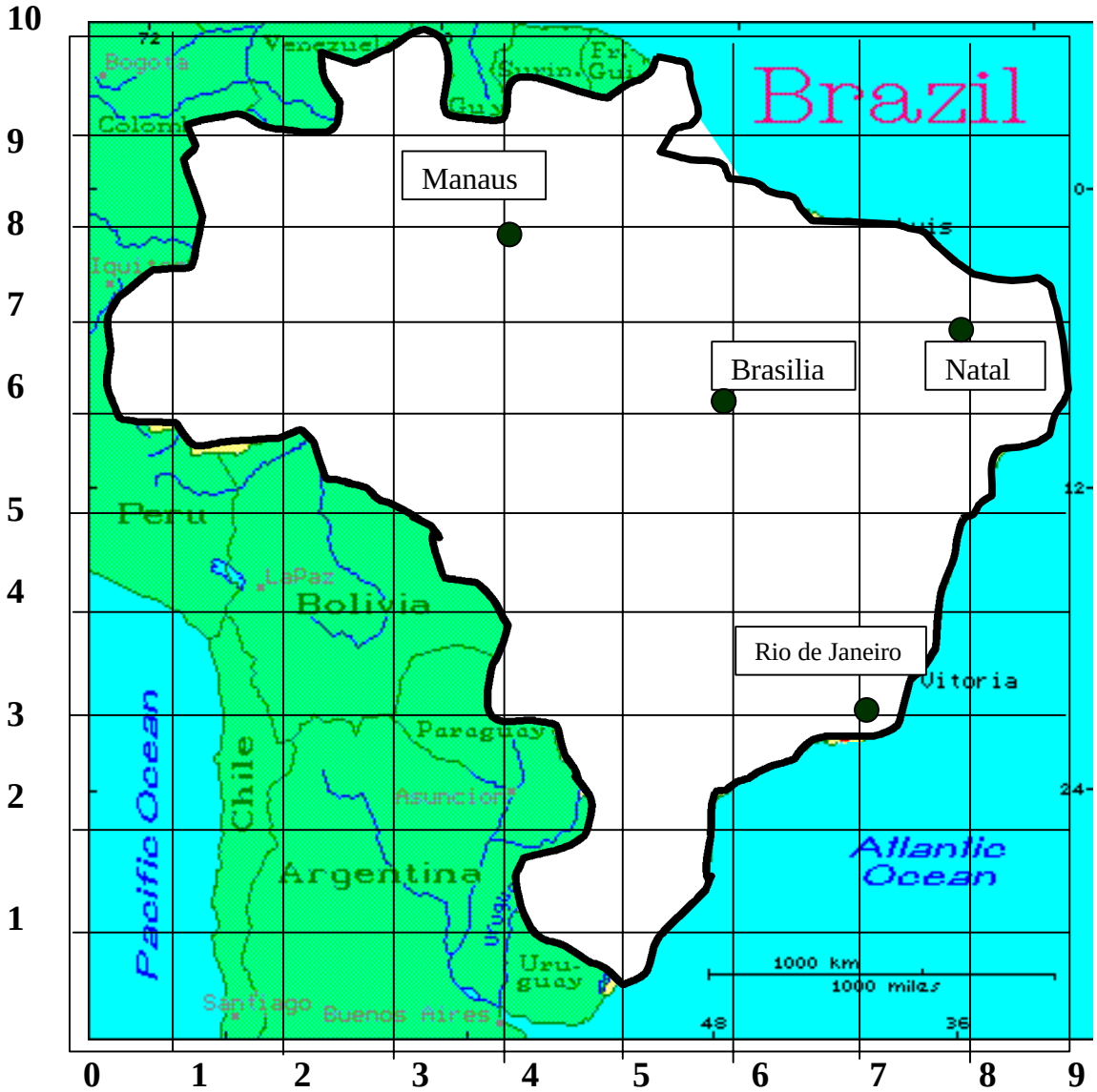
Rio de Janeiro (7 , 3) Natal (8 , 6)

Where in Brazil?

Student Resource Sheet # 1
(ANSWER KEY)

Name: _____ **Date:** _____

Michael began his study of Brazil by going to the Atlas. He found a map of Brazil. On the grid below, plot Manaus, and the other cities Michael found on the map using the given coordinates.



Manaus (3 , 8) Brasilia (6 , 5)

Rio de Janeiro (7 , 3) Natal (8 , 6)

Student Resource Sheet # 2

Name: _____ **Date:** _____

HOW FAR?

Here is a map of Brazil showing some of its cities. Locate the cities, estimate, and then measure the distance between the two cities in inches.

Cities	Estimate	Measure In Inches	Actual Distance In Miles
From Manaus to Brasilia			
From Sao Luis to Natal			
From Salvador to Rio de Janeiro			
From Sao Paulo to Porto Alegre			
From Negro to Macapa			

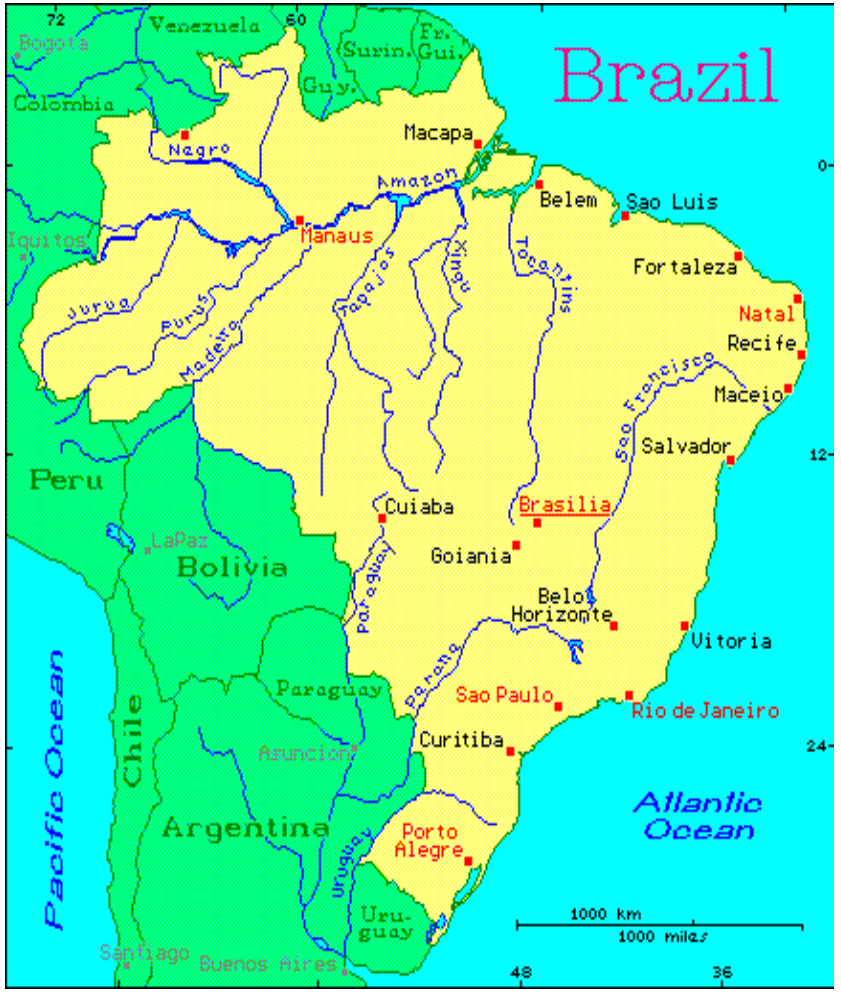
Using the scale, convert each distance in inches to the actual distance in miles.

<u>REFER TO THE TABLE</u>:
Between which 2 cities is there the farthest distance?

_____

Between which 2 cities is there the shortest distance?

_____

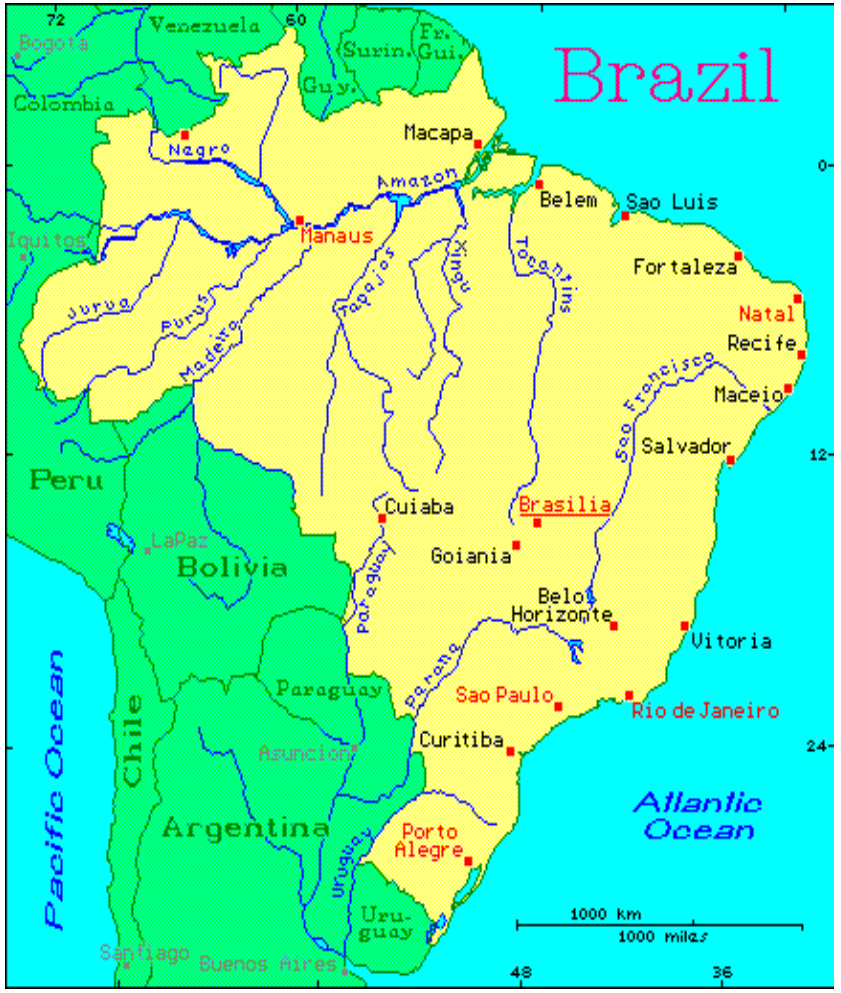


Student Resource Sheet # 2

Name: _____ **Date: _____** **(ANSWER KEY)**

HOW FAR?

Here is a map of Brazil showing some of its cities. Locate the cities, estimate, and then measure the distance between the two cities in inches.



Cities	Estimate	Measure In Inches	Actual Distance In Miles
From Manaus to Brasilia		2 in.	1,333 mi.
From Sao Luis to Natal		1 in.	666 mi.
From Salvador to Rio de Janeiro		1 ½ in.	1,000 mi.
From Sao Paulo to Porto Alegre		1 in.	666 mi.
From Negro to Macapa		1 ½ in.	1,000 mi.

Using the scale, convert each distance in inches to the actual distance in miles.

<u>REFER TO THE TABLE</u>:

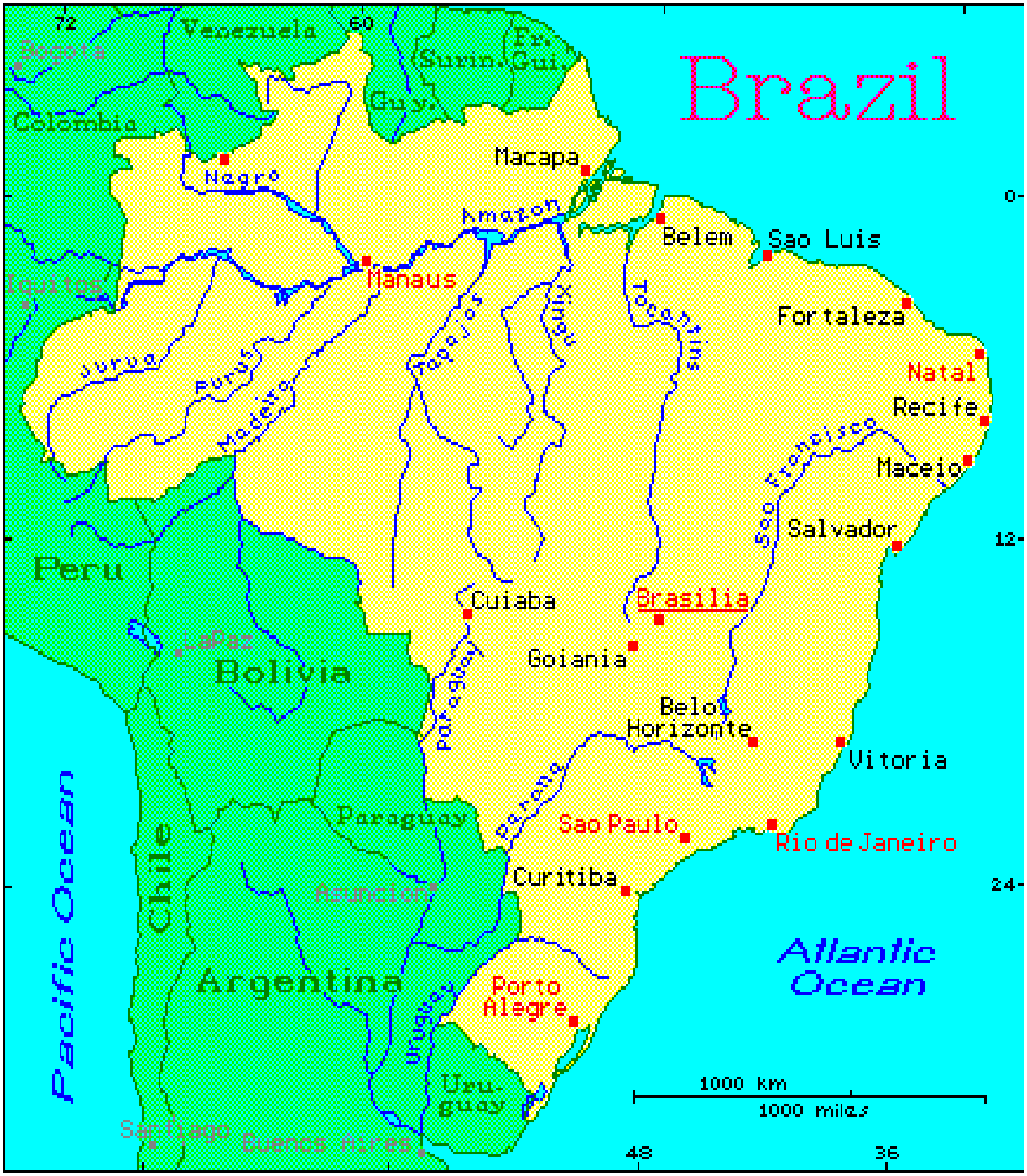
Between which 2 cities is there the farthest distance?

_Manaus and Brasilia_____

Between which 2 cities is there the shortest distance?

_Sao Luis and Natal; Sao Paulo and Porto Alegre

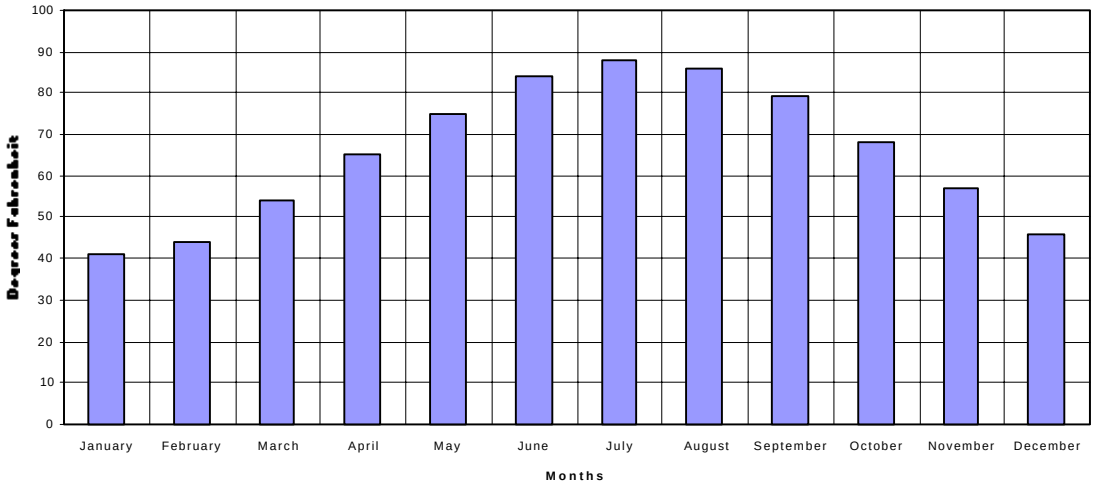
Map of Brazil



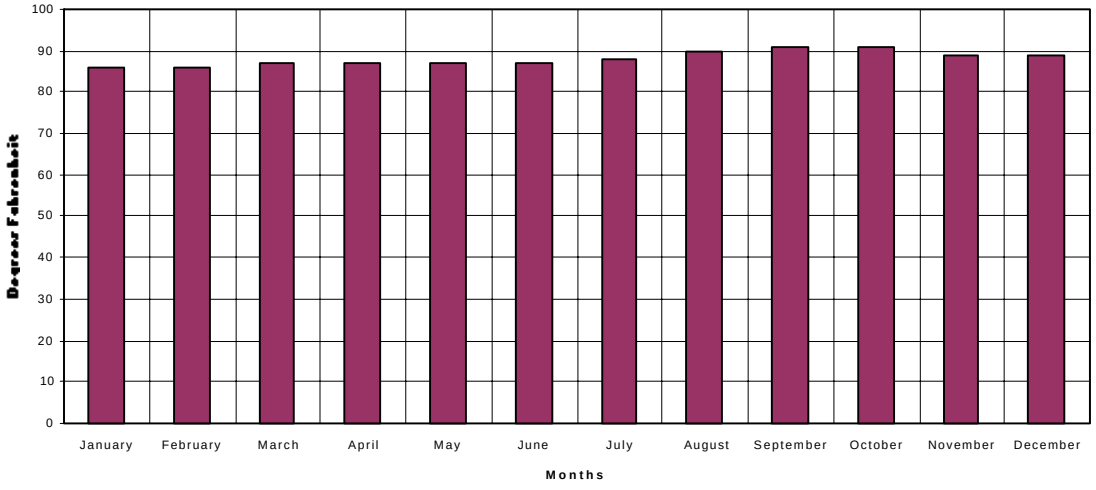
Name: _____ **Date:** _____

What's the Weather Like?

Average Monthly Temperature in Baltimore, Maryland



Average Monthly Temperature in Manaus, Brazil



Answer each question using the above bar graphs.

1. What is the average temperature in April in Manaus, Brazil? _____
2. What is the average temperature in April in Baltimore, Maryland? _____

3. Write a number sentence comparing the April temperatures in the two cities using the symbols > and <.

_____

4. Write a number sentence to show the difference between the temperature in December in Manaus, Brazil and the temperature in December in Baltimore, Maryland.

_____

5. Describe how the temperature in Baltimore, Maryland changes from January to December.

_____

_____

_____

6. Explain why there is a greater change in temperature in Baltimore, Maryland than in Manaus, Brazil.

_____

_____

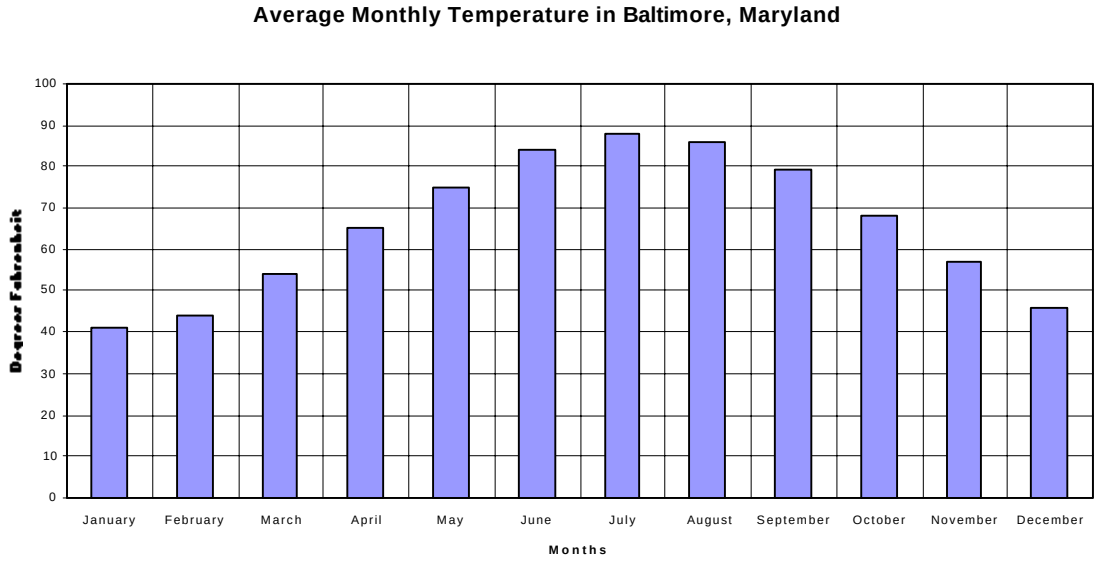
_____

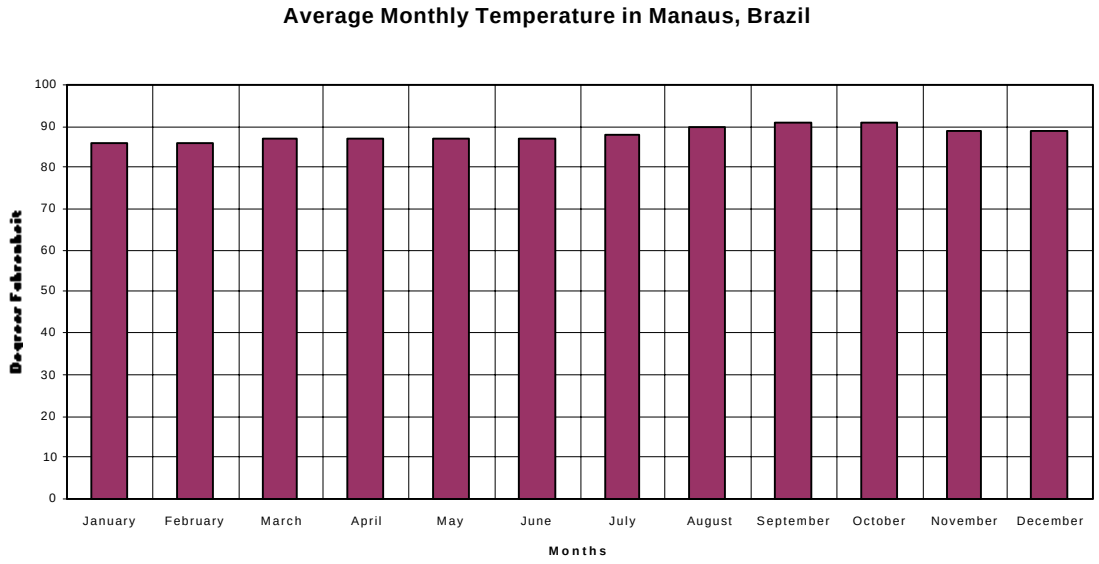
_____

Student Resource Sheet # 3
(ANSWER KEY)

Name: _____ Date: _____

What's the Weather Like?





Answer each question using the above bar graphs.

1. What is the average temperature in April in Manaus, Brazil? __87 Degree F____
2. What is the average temperature in April in Baltimore, Maryland? _ 65 Degree F_

3. Write a number sentence comparing the April temperatures in the two cities using the symbols > and <.

   65 Degree F < 87 Degree F OR 87 Degree F > 65 Degree F

4. Write a number sentence to show the difference between the temperature in December in Manaus, Brazil and the temperature in December in Baltimore, Maryland.

   89 Degree F - 46 Degree F = 43 Degree F

5. Describe how the temperature in Baltimore, Maryland changes from January to December.

   From January to July the temperature gradually increases then from July to December the temperature gradually decreases.

6. Explain why there is a greater change in temperature in Baltimore, Maryland than in Manaus, Brazil.

   There is a greater change in temperature in Baltimore than Manaus because Baltimore is farther away from the equator.

What to Pack!

Michael will be moving to Manaus, Brazil in December. Recall what you have learned about the weather in December in Manaus from the temperature bar graph and from the class discussion about seasons. Help Michael to pack his suitcase for what he will need when he arrives in Manaus in December. Complete the checklist below by placing a check mark in front of the items Michael should pack in his suitcase.

_____ winter coat	_____ bathing suit
_____ shorts	_____ sunglasses
_____ gloves	_____ short sleeve shirt
_____ sunscreen	_____ jeans
_____ snow boots	_____ sandals

Choose four of the above items and explain why Michael should or should not include them in his suitcase.

_____

_____

_____

_____

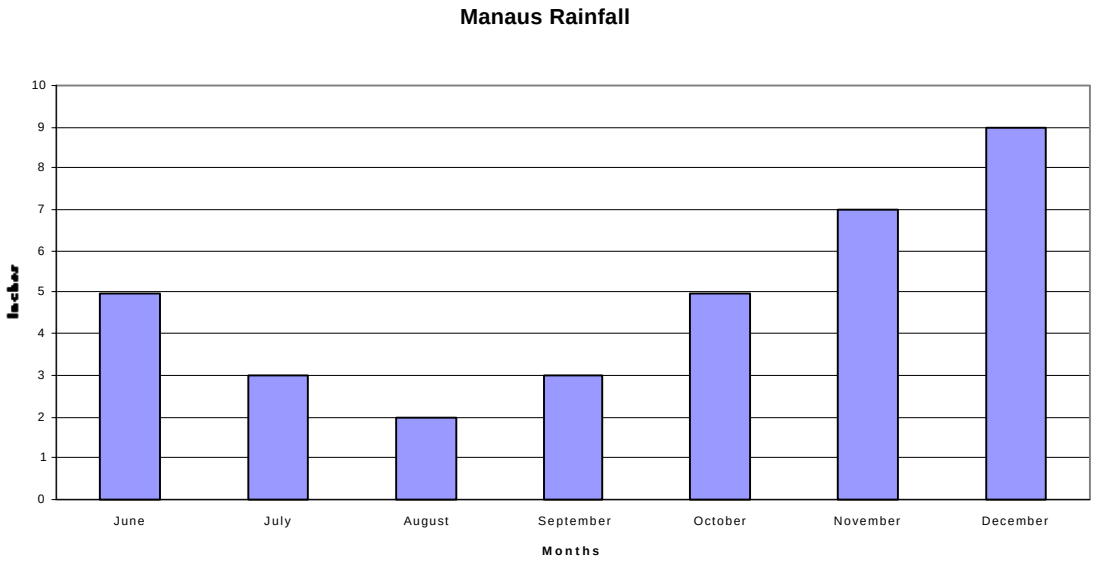
_____

_____

_____

_____

Average Monthly Rainfall in Manaus, Brazil



Note: The student's generated graph should resemble the graph above.

Criteria to consider when grading should include:

- **the title of the graph**
- **the labels for the horizontal and vertical axis**
- **bars which are colored to the correct height**

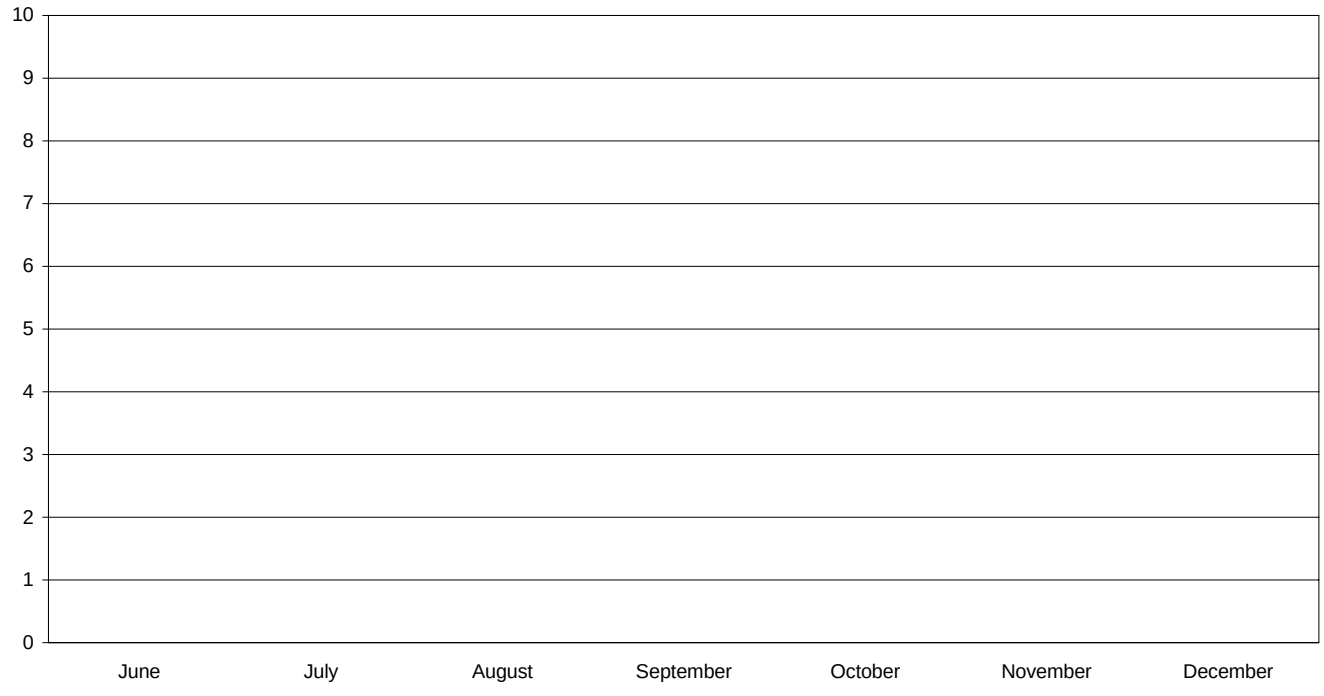
Rain, Rain and More Rain

The table below shows the average rainfall received in Manaus, Brazil during June through December. Take time to study the data on this table.

Average Monthly Rainfall in Manaus, Brazil

June	**5 inches**
July	**3 inches**
August	**2 inches**
September	**3 inches**
October	**5 inches**
November	**7 inches**
December	**9 inches**

Using the data in the table, construct a bar graph that shows the average monthly rainfall in Manaus, Brazil.



Estimation Strategies

Anchor = also known as a benchmark or sample or referent

- **The student chooses a friendly number such as 2, 5, or 10**
- **The student circles the anchor amount among the group of objects or uses a rubber band to separate the anchor amount**
- **The student uses the knowledge of the size of the anchor amount to estimate the total number of objects**

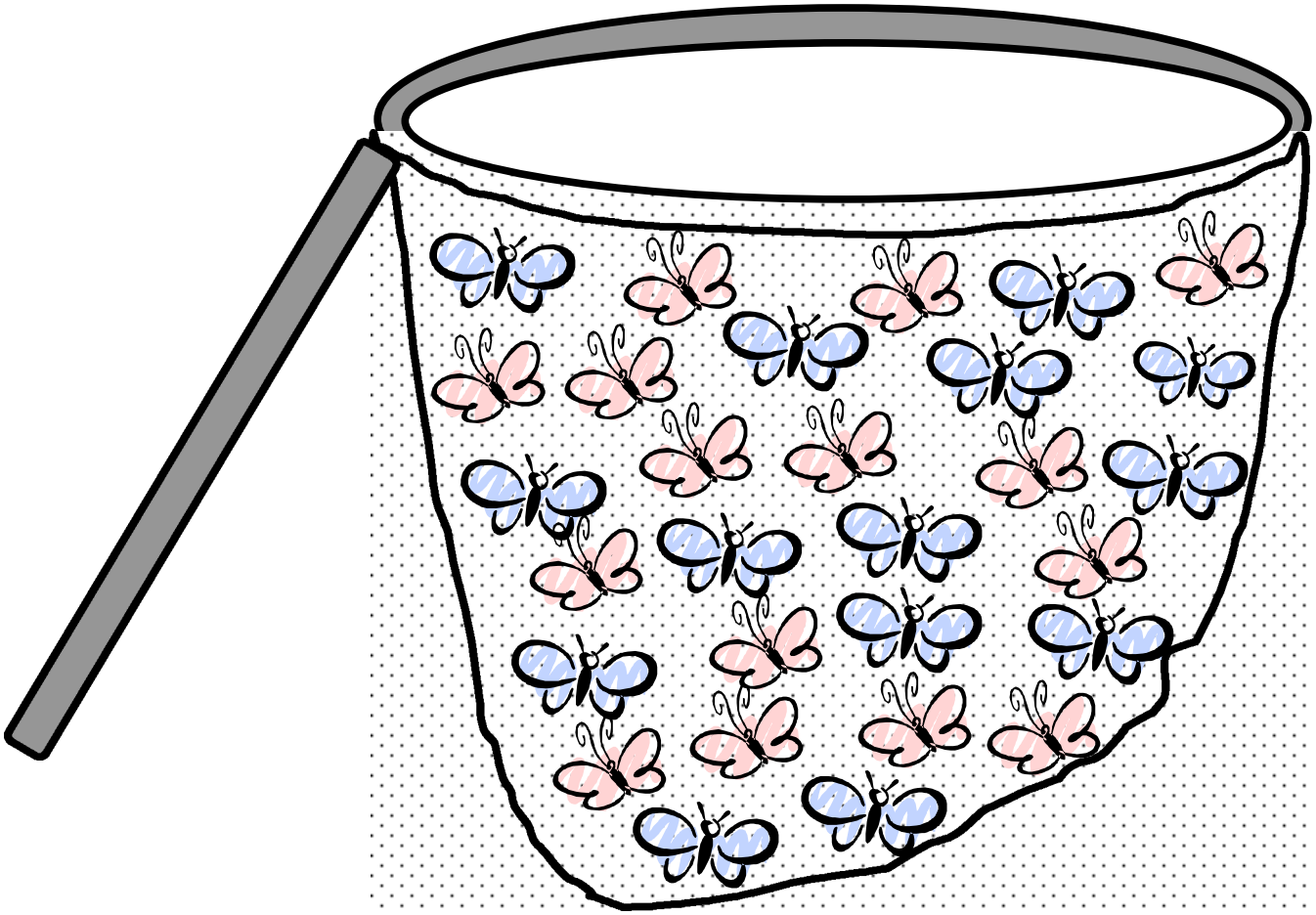
Partitioning = this strategy is helpful when working with a quantity larger than one hundred

- **The student partitions or divides the total group into four sections**
- **The student uses the information in one section to determine the total number**

Bunches of Butterflies

How many butterflies are in the net? To find out, first take a quick look and make a guess. Then, choose, record, and make an anchor or benchmark. Now, using your anchor, estimate how many butterflies there are. Finally, carefully count to find the actual number of butterflies in the net.

Guess	Anchor	Estimate	Actual



Name: _____ Date: _____

S-L-O-W Moving

The three-toed sloth is only one of the many different creatures that lives in and depends on the trees of the Amazon Rainforest. The three-toed sloth is quite unique because of its incredibly slow movements.

Use your problem solving strategies to solve the problem below about the sloth.

Problem:

The trees in the rainforest can grow to be very tall. One such tree was 100 feet tall. At the top of the tree lived a sloth. One day the sloth decided he would climb down the tree. He climbed two feet in one minute. If he continues in this way, how many minutes will it take the sloth to reach the bottom of the tree?

Read and Understand:

What do you know? _____

_____

What are you asked to find? _____

_____

Plan:

What strategy will you use to solve this problem? How will you use this strategy?

_____

_____

_____

Solve:

Use the strategy you have chosen to solve the problem. Be sure to show your work.

It will take the sloth _____ minutes to climb down the tree.

Look Back:

Use math words to explain why your answer is correct.

_____

_____

_____

_____

_____

_____

Name: _____ Date: _____

S-L-O-W Moving

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Read and Understand:

What do you know***? The tree is 100 feet tall. The sloth climbs two feet in one minute.***

What are you asked to find? ***At this rate, how many minutes will it take the sloth to reach the bottom of the tree.***

Plan:

What strategy will you use to solve this problem? How will you use this strategy?

_SAMPLE ANSWERS: Writing a Number Sentence
Drawing a Picture.
Looking for a Pattern.

Solve:

Use the strategy you have chosen to solve the problem. Be sure to show your work.

Student should use the chosen strategy to give an accurate answer.

It will take the sloth ***__50__*** minutes to climb down the tree.

Look Back:

Use math words to explain why your answer is correct.

Student's explanation should include words and numbers that explain how they used the strategy chosen to solve the problem.

A New Life in a New Country

You have been helping Michael to prepare to move to Manaus, Brazil. Think about what you have learned about Brazil over these last few days. Recall the information you have learned about the weather, location of cities and wildlife of the new environment Michael will be moving to.

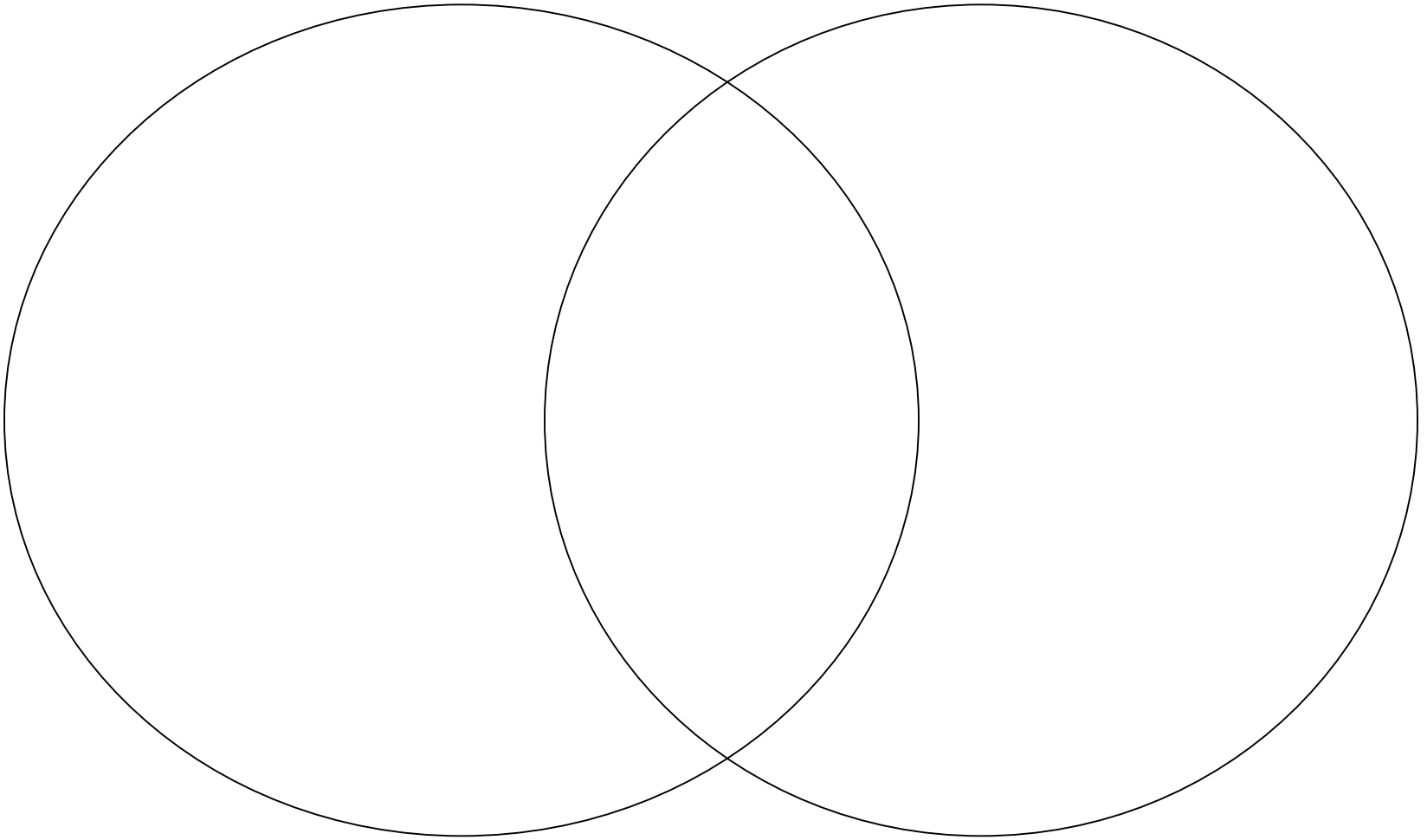
Your teacher has asked you to write a report to inform Michael of the similarities and differences between Baltimore, Maryland and Manaus, Brazil.

Student Resource Sheet # 9

Name: _____ **Date: _____**

Use this Venn Diagram to help you compare and contrast Baltimore, Maryland and Manaus, Brazil.

_____ _____



Name: _____ **Date:** _____

Informational Report

_____

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Informational Report
Criteria for Scoring

The informational report should:

- consider the audience (Michael – a child the age of your students who is preparing to move to a new country)
- be written in paragraph form
- begin with a topic sentence that introduces the topic
- contain several detail sentences which explain the similarities and differences between Baltimore, Maryland and Manaus, Brazil
- include supporting details that compare weather, cities and wildlife
- end with a closing sentence
- be neat and contain no spelling, punctuation or capitalization errors